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We hear repeated over and over: the decision on hydrofracking must be based on science, not emotion. After 45 years in research involving chemistry and biology, I think I recognize good science when I see it. I do not see it in the SGEIS.

One example: Theory becomes dogma if accepted without adequate testing. The dogma is--many deep layers of rock separate the fracked zone from aquifers, so it is impossible for fracking fluid or methane to migrate up that far. The supporting "evidence" is that (supposedly) no contamination has been proved to have occurred in 60 years of fracking.

Not true, and even if it were accurate, not legally proved does not mean it never happened--especially when legal resources heavily favor the corporation, and the potential litigants are pressured to sign non-disclosure agreements. Also, the history of high-volume, slick water fracking of horizontal wells is not 60 years, but less than ten years.

There are many potential avenues for migration, including vertical faults, abandoned wells, seismic events, and failures in the well casing and cementing. Sooner or later, concrete fails and steel corrodes.

It is quite possible that migration via many of these avenues would be a slow process. It is still more likely that if contamination did occur, it would not be detected for a long time; and that when detected, fracking as the source would be difficult to prove in court. (How long did it take to prove tobacco affects health?)

Also, how often has a researcher looked for aquifer contamination years after a fracking event? How long after the event and over how large an area would one look? What chemicals would be included in the search? Who would pay for the testing? Who would do it?

Nevertheless, evidence of migration has already started to show up in peer-reviewed papers. Methane was more prevalent in water wells close to fracking. Methane found in water wells showed the geological "fingerprint" of methane developed deep down in the earth, not that of the gas developed in shallow layers. And an EPA study still underway in Wyoming indicates even stronger signs of migration.

Yes, base the SGEIS on science, but on objective science, science that brings to bear thorough testing of theory, not mere assumptions of safety. And include the whole range of science from medical to social to environmental science, especially in relation to cumulative impacts. By the way, in the face of poor science, some emotion may be appropriate.

*Views expressed are my own and not those of my university, college, or department.
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